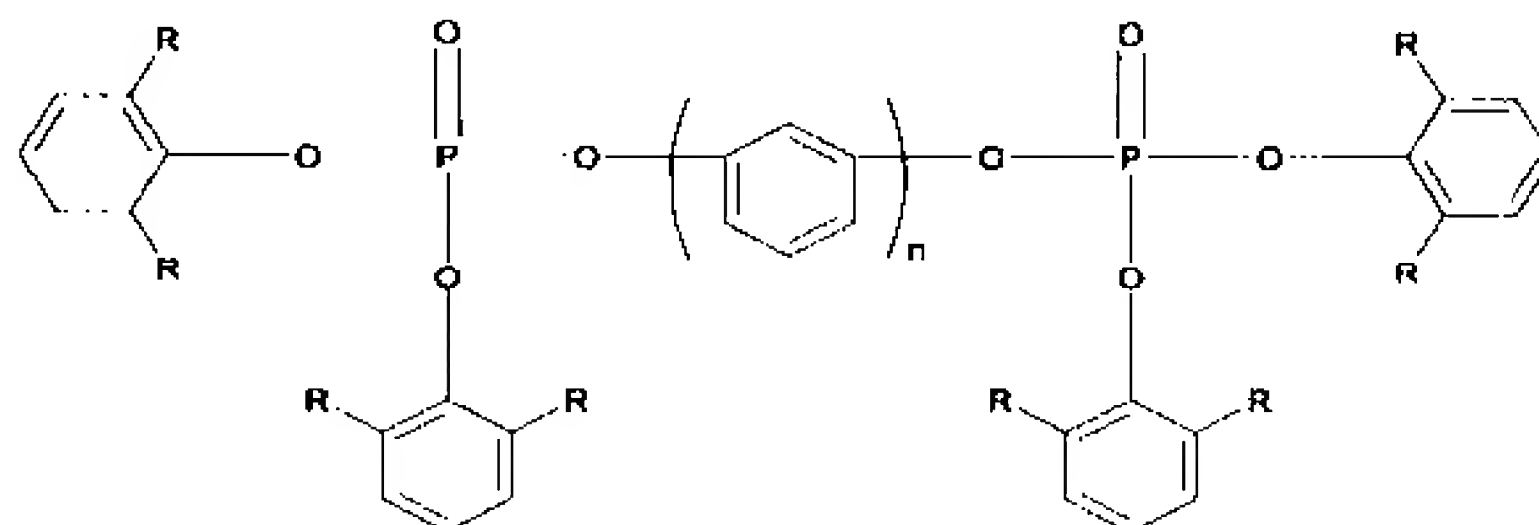


## Claims

- [1] A nonaqueous electrolyte for a lithium battery composed of an organic solvent and a lithium salt, comprising 0.1 to 10% by weight of a benzene-substituted phosphate derivative having the following formula (I):



wherein R represents a halogen-substituted C1-C8 alkyl or allyl compound or an unsubstituted C1-C8 alkyl or allyl compound, and n is an integer between 1 and 3.

- [2] The nonaqueous electrolyte as set forth in claim 1, wherein the solvent of the nonaqueous electrolyte is a mixture of at least one organic solvents selected from the group consisting of ethylene carbonate(EC), propylene carbonate(PC), dimethyl carbonate(DMC), diethyl carbonate(DEC), ethylmethyl carbonate(EMC) and fluorobenzene(FB).
- [3] The nonaqueous electrolyte as set forth in claim 1, wherein the lithium salt is at least one selected from the group consisting of  $\text{LiPF}_6$ ,  $\text{LiBF}_4$ ,  $\text{LiClO}_4$ ,  $\text{LiN}(\text{C}_2\text{F}_5\text{SO}_2)_2$ ,  $\text{LiN}(\text{C}_2\text{F}_5\text{SO}_2)_3$  and  $\text{LiN}(\text{CF}_3\text{SO}_2)_2$ , and the concentration of the lithium salt in the electrolyte ranges from 0.8 to 2 M.
- [4] A battery comprising an anode, a cathode and an electrolyte, wherein the electrolyte comprises the nonaqueous electrolyte as set forth in claim